

REMARKS

Claims 1-33 are pending. Claims 1, 7, and 13 have been amended. Claims 22-33 have been added. Reexamination and reconsideration of this application are respectfully requested.

In the October 29, 2003 Office Action, the Examiner rejected claims 1-21 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,269,398 to Leong et al. ("Leong"). This rejection is respectfully traversed.

Embodiments of the present invention are directed to a router having a routing component that implements IP routing protocols for data processed by the router. A workstation functions as the router via the IP routing protocols. An interface component allows a user to view and modify dynamic routing protocol features of the router in real-time, and the router utilizes a real-time operating system. The interface component displays the features of the router to the user as a hierarchical tree having attributes that store values relating to the IP routing protocols and components that represent functionality of the IP routing protocols. The components contain one or more sub-components or attributes. Attributes are modifiable within a single initialization of the router. The hierarchical tree displays the attributes, the components, and the subcomponents to the user.

In the October 29, 2003 Office Action, the Examiner rejected claims 1-21 under 35 U.S.C. §102(e) as being anticipated by Leong. The Examiner stated that Leong discloses a routing component that implements routing protocols for data processed by the router, and an interface component through which a user may view and modify features of the router. The Examiner also stated that the interface component presents

the features of the router as a hierarchical tree having attributes that store values relating to the router protocols and components that represent functionality of the router protocols, and the attributes are modifiable within a single initialization of the router.

Independent claim 1, as amended, recites (with emphasis added):

1. A router comprising:
a routing component that implements **IP routing protocols** for data processed by the router, **wherein a workstation functions as the router via the IP routing protocols**; and
an interface component for a user to view and modify dynamic routing protocol features of the router in real-time, wherein **the router utilizes a real-time operating system**, the interface component displaying the features of the router to the user as a hierarchical tree having attributes that store values relating to the IP routing protocols and components that represent functionality of the IP routing protocols, the components containing one or more sub-components or attributes, the attributes being modifiable within a single initialization of the router, and **the hierarchical tree displaying the attributes, the components, and the subcomponents to the user**.

Leong discloses a system and method for *monitoring* remote routers in networks for available protocols and providing a graphical representation of information received from the routers. Leong further teaches providing an interface allowing a network manager to view the status of a router and to issue commands, such as Telnet commands, to the router. [Col. 4, lines 17-20.] Leong also discloses a method and apparatus for "iconifying" a router network management session allowing review of the status of a router.

Leong is therefore directed to the display of the general configuration of a router, router fault information, and performance information. However, Leong does not disclose, teach, or suggest a router having an interface component for a user to view and modify *dynamic routing protocol* features of the router in real-time, where *the router utilizes a real-time operating system*.

The polling taught by Leong has nothing to do with modifying *dynamic routing protocol* features of the router in real-time, where *the router utilizes a real-time operating system*. Instead, Leong teaches “[t]here are three types of information which the router network management system polls for: (1) basic information on the router, block 310; (2) information on available protocols, block 311; and (3) information on router interfaces, block 313.” [Col. 8, lines 57-61.] Therefore, the polling taught by Leong relates to the acquisition of information from the router. However, there is no teaching that the polling is utilized to modify features of the router in real-time, where the router utilizes a real-time operating system. Use of a real-time operating system for the router is advantageous because dedicated routers typically operate in real-time, and therefore use a real-time operating system. Real-time operating systems are usually event-driven, which means they perform tasks based on the occurrence of an event (e.g., receipt of packets). Accordingly, whereas the teachings of Leong are directed to the *monitoring* of a router, independent claim 1, as amended, recites limitations directed toward *modifying dynamic routing protocol features* of the router in *real-time, where the router utilizes a real-time operating system*. Moreover, Leong does not disclose, teach, or suggest modifying dynamic routing protocol features of the router. Dynamic routing protocol features, such as those of OSPF, are beneficial because they enable routers to share routing information and to learn the routes available to them dynamically. Therefore, independent claim 1, as amended, distinguishes over Leong.

Independent claim 1, as amended, further recites that the routing component implements IP routing protocols for data processed by the router, where *a workstation functions as the router via the IP routing protocols*. It is advantageous for the

workstation to function as a router because a separate router is not required for the network. Such a routing component, as required by independent claim 1, as amended, is not disclosed, taught, nor suggested by Leong.

Independent claim 1, as amended, further recites that interface component displays the features of the router to the user as a hierarchical tree having attributes that store values relating to the router protocols and components that represent functionality of the router protocols, the components containing one or more sub-components or attributes, and *the hierarchical tree displays the attributes, the components, and the subcomponents to the user*. Displaying a hierarchical tree displaying the attributes, components, and subcomponents allows a user to easily inspect, modify, and read the router attributes. Leong discloses no such hierarchical tree displaying attributes, components, and subcomponents to the user.

Therefore, independent claim 1, as amended, distinguishes over Leong. Claims 2-6, 19, and 22-25 all depend, directly or indirectly, from independent claim 1, as amended, and therefore also distinguish over Leong for the same reasons as those set forth above with respect to independent claim 1, as amended. Independent claims 7 and 13, each as amended, contain limitations similar to those of independent claim 1, and therefore also distinguish over Leong for reasons similar to those set forth above with respect to independent claim 1, as amended. Claims 8-12, 20, and 26-29 all depend, directly or indirectly, from independent claim 7, as amended, and therefore also distinguish over Leong for the same reasons as those set forth above with respect to independent claim 7, as amended. Claims 14-18, 21, and 30-33 all depend, directly or indirectly, from independent claim 13, as amended, and therefore also distinguish

over Leong for the same reasons as those set forth above with respect to independent claim 13, as amended.

Moreover, new claims 22-33 further distinguish over Leong. Specifically, new claim 22 recites (with emphasis added): “[t]he router of claim 1, **wherein one of the attributes relates to a physical connection used by the interface component, and having values indicating networks.**” Leong does not disclose, teach, or suggest such limitation. Accordingly, new claim 22 further distinguishes over Leong. New claims 26 and 30 contain limitations similar to those of new claim 22, and therefore also further distinguish over Leong for reasons similar to those set forth above with respect to new claim 22.

New claim 23 recites (with emphasis added): “[t]he router of claim 1, **wherein one of the attributes describes a cost to transmit a packet to the interface component.**” Leong does not disclose, teach, or suggest such limitation. Accordingly, new claim 23 further distinguishes over Leong. New claims 27 and 31 contain limitations similar to those of new claim 23, and therefore also further distinguish over Leong for reasons similar to those set forth above with respect to new claim 23.

New claim 24 recites (with emphasis added): “[t]he router of claim 1, **wherein one of the attributes indicates a priority of a dynamic routing protocol designated router election for a local network.**” Leong does not disclose, teach, or suggest such limitation. Accordingly, new claim 24 further distinguishes over Leong. New claims 28 and 32 contain limitations similar to those of new claim 24, and therefore also further distinguish over Leong for reasons similar to those set forth above with respect to new claim 24.

New claim 25 recites (with emphasis added): “[t]he router of claim 1, **wherein one of the attributes specifies how often the router should contact neighbor nodes in order to maintain a live connection.**” Leong does not disclose, teach, or suggest such limitation. Accordingly, new claim 25 further distinguishes over Leong. New claims 29 and 33 contain limitations similar to those of new claim 25, and therefore also further distinguish over Leong for reasons similar to those set forth above with respect to new claim 25.

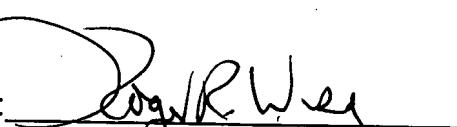
Applicant believes that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

PILLSBURY WINTHROP LLP

Date: January 29, 2004

By:


Roger R. Wise
Registration No. 31,204
Attorney For Applicant

725 South Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
Telephone: (213) 488-7100
Facsimile: (213) 629-1033